

Serial No. 10/636,006

WHAT IS CLAIMED IS: Claims as renumbered by Examiner
in view of presence of 2 claims numbered as 14.

1. A tarnish resistant silver alloy, comprising:
at least about 85% by weight of silver, and
a balance of said alloy including zinc, copper, indium, and tin.
2. The alloy of claim 1, further comprising iron.
3. The alloy of claim 2, further comprising at least one of gold, silicon, manganese, boron, bismuth, cobalt, chromium and lead.
4. The alloy of claim 3, wherein said alloy includes gold, silicon, manganese, boron, bismuth, cobalt, chromium and lead.
5. The alloy of claim 4, further comprising at least one of vanadium, cerium, iridium and zirconium.
6. The alloy of claim 5, wherein said alloy includes vanadium, cerium, iridium and zirconium.
7. The alloy of claim 1, wherein:
 - (a) said silver (Ag) is present in an amount of at least about 92.5% by weight;
 - (b) said zinc (Zn) is present in an amount of about 5% or less by weight;
 - (c) said copper (Cu) is present in an amount of about 2% or less by weight; and
 - (d) said indium (In) is present in an amount of about 0.2% or less by weight.
8. The alloy of claim 1, wherein said silver, zinc, copper, tin and indium are each present in elemental form.

9. The alloy of claim 1, further comprising at least one of: gold (Au) in an amount of about 0.5% or less by weight and silicon (Si) in an amount of about 0.5% or less by weight.

10. The alloy of claim 1, wherein:

(a) said silver is present in an amount of about 93.8% by weight; and

(b) said copper is present in an amount of about 1.25% by weight.

11. The alloy of claim 10, wherein said indium is present in an amount of about 0.1% by weight.

12. The alloy of claim 11, wherein said zinc is present in an amount of about 4.5% by weight.

13. The alloy of claim 1, further comprising at least one of the group consisting of: iron (Fe), silicon (Si), manganese (Mn), boron (B), bismuth (Bi), cobalt (Co), chromium (Cr), lead (Pb), vanadium (V), cerium (Ce), iridium (Ir), and zirconium (Zr).

14. The alloy of claim 13, wherein:

(a) said B, Bi, Co, and Cr, if present, are each in an amount of up to about 0.0010% by weight;

(b) said Pb, V, and Ce, if present, are each in an amount of up to about 0.0025% by weight;

(c) said Fe, if present, is in an amount of about 0.009% or less by weight;

(d) said Si, if present, is in an amount of about 0.035% or less by weight;

(e) said Ir, if present, is in an amount of about 0.01% or less by weight; and

(f) said Zr, if present, is in an amount of about 0.005% or less by weight.

~~15~~ 14. An article made from the alloy of claim 1.

~~16~~ 15. The article of claim ~~14~~¹⁵, wherein said article is one of a bracelet, a ring, and a tea kettle.

- ~~17~~¹⁶. A tarnish resistant sterling silver alloy, comprising:
- (a) silver in an amount of from about 92.5% to about 95% by weight;
 - (b) zinc in an amount of about 5% or less by weight;
 - (c) copper in an amount of about 1.5% or less by weight;
 - (c) indium in an amount of about 0.2% or less by weight;
 - (d) tin in an amount of about 2%; and
 - (e) at least one further element selected from the group consisting of: iron (Fe), gold (Au), copper (Cu), indium (In), zinc (Zn), tin (Sn), iron (Fe), silicon (Si), manganese (Mn), boron (B), bismuth (Bi), cobalt (Co), chromium (Cr), lead (Pb), vanadium (V), cerium (Ce), iridium (Ir), and zirconium (Zr).

- ~~18~~¹⁷. The alloy of claim ~~16~~¹⁷, wherein:
- (a) said zinc (Zn) is present in an amount of from about 2% to about 5% by weight;
 - (b) said copper (Cu) is present in an amount of from about 1% to about 1.5% by weight;
 - (c) said indium (In) is present in an amount of from about 0.05% to about 0.2% by weight;
 - (d) said B, Bi, Co, and Cr, if present, are each in an amount of about 0.0010% by weight;
 - (e) said Pb, V, and Ce, if present, are each in an amount of about 0.0025% by weight;
 - (f) said Fe, if present, is in an amount of about 0.009% by weight;
 - (g) said Si, if present, is in an amount of about 0.035% by weight;
 - (h) said Ir, if present, is in an amount of about 0.01% by weight; and
 - (g) said Zr, if present, is in an amount of about 0.005% by weight.

- ~~19~~¹⁸. An article made from the alloy of claim ~~16~~¹⁷.

- ~~20~~¹⁹. The article of claim ~~18~~¹⁹, wherein said article comprises one of a ring, a bracelet and a tea kettle.

- ~~20.~~ ²¹ A method of making an article comprising the steps of:
- (a) pre-forming an alloy according to claim 1 into a pre-formed piece;
 - (b) melting said piece to form a melt;
 - (c) casting said melt into a mold to form a cast article;
 - (d) cooling said cast article; and
 - (e) removing said article from said mold.

- ~~22.~~ ²¹ The method of claim ~~20~~, further comprising the step of:
- (f) reworking residual alloy remaining in said mold into a virgin alloy for subsequent use in making subsequent articles of jewelry.